

STEEL MEMBER EXCELLENT IN WEAR RESISTANCE AND ITS PRODUCTION**Publication number:** JP4254574**Publication date:** 1992-09-09**Inventor:** SHIBATA SHINYA**Applicant:** MAZDA MOTOR**Classification:**

- International: C23C8/22; C23C8/32; C23C8/42; F16H53/02;
F16H55/06; C23C8/08; C23C8/00; C23C8/06;
F16H53/00; F16H55/06; (IPC1-7): C23C8/22; C23C8/32;
C23C8/42; F16H53/02; F16H55/06

- European:**Application number:** JP19910035005 19910206**Priority number(s):** JP19910035005 19910206[Report a data error here](#)**Abstract of JP4254574**

PURPOSE: To develop a steel member excellent in wear resistance by highly carburizing a Cr-contg. steel member, internally oxidizing the Cr in the outermost surface, then carburizing and hardening or carbonitriding and hardening the member and further sulfurizing the member. **CONSTITUTION:** The base material of a low-alloy steel contg., by weight, 0.5-2.5% Cr and 0.1-0.3% C is highly carburized to internally oxidize the Cr in the outermost surface of the steel member, then carburized and hardened in a low-carbon- potential atmosphere or carbonitrided and hardened to form a metal carbide unprecipitated layer having 2-10µm thickness due to the formation of the solid soln. of the metal carbide, and a metal carbide precipitated layer is formed in the layer directly thereunder. The member is then sulfurized at low temp. to form a sulfurized layer having 2-10µm thickness within the depth of the metal carbide unprecipitated layer. A steel material excellent in initial fitness and wear resistance is obtained in this way.

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